

Notice of Allowability

Application No.

09/980,496

Examiner

Dah-Wei D. Yuan

Applicant(s)

URAIRI ET AL.

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/12/05.
2. ☒ The allowed claim(s) is/are 6 and 7.
3. ☒ The drawings filed on 04 December 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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BATTERY SEPARATOR CONTAINING CARBODIIMIDE POLYMER

Examiner: Yuan

S.N. 09/980,496

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January 21, 2005

Detailed Action

1. The Applicant's amendment filed on January 12, 2005 was received. Claims 1-5 were amended.
2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action issued on October 19, 2004.

Examiner's Amendment

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
4. Authorization for this examiner's amendment was given in a telephone interview with Mr. John K Shin on January 21, 2005. The application has been amended as follows:

In specification, page 1, before "Technical Field" insert the following,

"This is a National Stage entry of International Application PCT/JP01/02918, with an international filing date of April 4, 2001, which was published under PCT Article 21(2) in Japanese, and the disclosure of which is incorporated herein by reference."

Claim Rejections

5. The claim rejections under 35 U.S.C. 103(a) as obvious over Otani et al. (JP 2000-223106), Amano et al. (US 5,416,149), and Nakamura et al. (EP 0805172 A2) on claims 1-3,5 are withdrawn because these claims have been canceled. The claim rejections under 35 U.S.C. 103(a) as obvious over Kung (US 5,389,471), Amano et al. (US 5,416,149), and Nakamura et al. (EP 0805172 A2) on claims 1,2 are withdrawn because these claims have been canceled.

Reasons for Allowance

6. Claims 6,7 are allowed. The invention of independent claim 6 recites a battery separator obtained by applying a polymer having in the molecule a carbodiimide unit having a formula of $[-R-N=C=N-]_n$ (I) to a porous sheet substrate, which comprises a porous sheet substrate produced by aggregating polycarbodiimide-coated polymer obtained by forming a coating layer of the polymer of formula (I) on the surface of core particles. The closest prior arts of record, Otani et al., Amano et al., Nakamura et al. and Kung, do not disclose or suggest that the separator substrate is produced by aggregating polycarbodiimide-coated polymer particles obtained by forming a coating layer of the polymer of formula (I) on the surface of core particles.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dah-Wei D. Yuan whose telephone number is (571) 272-1295. The examiner can normally be reached on Monday-Friday (8:00-5:00).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dah-Wei D. Yuan
January 21, 2005

A handwritten signature in black ink, appearing to read "Dahwei Yuan", with a long horizontal flourish extending to the right.